

## The Mint of the United States,

AT

PHILADELPHIA, PENN.,

Assay Department, May 25, 1883

Sir: I have carefully considered the statements of Mr F. C. Blake, Supt. of the Penn<sup>a</sup> Lead Co, and am convinced that we have reported their bars correctly. Each bar is sampled by an inside cutting and when the deviation is unusual, we repeat.

All the bars in question (except a few which contained gold) have been made up into ingots, <sup>for coinage</sup> and passed. This is the best general test of our bar assays; <sup>and is in some respects a better check than a re-assay of the bars would be.</sup> The Miller & Refiner calculates his melts for 899 fine. The fact that the ingots made from these bars averaged a little under that figure proves that our bar assays were reported at the highest possible mark. In the extreme case of bars 5434 and 5435 reported by us at  $996\frac{1}{2}$  the ingots made from them resulted a shade under their calculated fineness 899. This ought to be sufficient.



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AT

PHILADELPHIA, PENN.,

Assay Department, ....., 187 .

But I must add,

1. It is not easy to make homogeneous melts of 12000 ounces, especially when lead is present.
2. The "variable personal error" appears exaggerated because we only report to the half thousandth. Thus, the distinction between a weak 998 and a strong  $997\frac{3}{4}$  is not practical; but the latter would be reported lower by a half thousandth instead of a quarter or an eighth which it really might be. For instance; bars 5245-8 assayed  $997\frac{3}{4}$ ; 5249 + 50, 998; 5251 + 52,  $997\frac{3}{4}$ . Now, the last two were reported 998 or a  $\frac{1}{4}$  above the assay, by way of compensating in some measure the loss in quarters on the first four.
3. But if dead uniformity be such a desideratum the whole lot might have been reported at  $997\frac{1}{2}$  without violence to any of the titles. I believe Messrs Handy & Cruise would rather have



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AT

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the benefit of such fractions as we can safely give.

4. There must be a reason why Penn<sup>d</sup> Lead Co's bars nearly always show these variations, and the products of some other refineries nearly always show absolute uniformity and are fully up to their stamp. The Boston Electrode we report in solid columns of from twenty to fifty bars at 999. The next melts prove both; and the "lack of uniformity in these differences" noted by Mr Blake carries its own complaint back to the melting pot.
5. There are cases where we find and report Pa. Lead Co bars above the stamp, as in 5566 to 5592. We do not hear complaints in cases of this kind and want of uniformity which results in gain to the principal is not objected to.

Very Respectfully

Jacob B. Eckfeldt

H. A. London Smelter Supl.

Assayst

551

N. S. Mint, Phila  
May 25/83

Jacob B. Eckfeldt  
Assayed,

Repy to H. C. Black,  
Supt Pa. Lead Co. Com-  
-plaining of incorrect  
assay of Silver Bars  
sold by Handy & Conison

Recd  
May 25/83

[Abstract:] Reply to F.C. Blake, Supt. Pa. Lead Co., complaining of incorrect assays...

The Mint of the United States,  
At Philadelphia, Penn.,  
Assay Department,  
May 25, 1883

Sir:

I have carefully considered the statements of Mr. F.C. Blake, Supt. of the Penna. Lead Co, and am convinced that we have reported their bars correctly. Each bar is sampled by an inside cutting and where the duration is unusual, we repeat.

All the bars in question (except a few which contained gold) have been made up into ingots, for coinage and passed. This is the best general test of our bar assays; and is in some respects a better check than a reassay of the bars would be. The Melter & Refiner calculates his melts for 899 fine. The fact that the ingots made from these bars averaged a little under that figure proves that our bar assays were reported at the highest possible mark. In the extreme case of bars 5434 and 5435 reported by us at  $996 \frac{1}{2}$  the ingots made from them resulted a shade under their calculated fineness 899. This ought to be sufficient.

But I must add,

1. It is not easy to make homogenous melts of 12000 ounces, especially when lead is present.

2. The "variable personal error" appears exaggerated because we only report to the half thousandth. Thus, the distinction between a weak 998 and a strong  $997 \frac{3}{4}$  is not practical; but the latter would be reported lower by a half thousandth instead of a quarter or an eighth which it really might be. For instance: bars 5245 – 8 assayed  $997 \frac{3}{4}$  ; 5249 & 50, 998; 5251 & 52,  $997 \frac{3}{4}$ . Now, the last two were reported 998 or a  $\frac{1}{4}$  above the assay, by way of compensating in some measure the loss in quarters on the first four.

3. But if dead uniformity be such a diseducation the whole lot might have been reported at  $997 \frac{1}{2}$  without evidence to any of the titles. I believe Messrs. Handy & Cunise would rather have the benefit of such fractions as we can safely give.

4. There must be a reason why Penna. Lead Co.'s bars nearly always show these variations, and the products of some other refineries nearly always show absolute uniformity and are fully up to their stamp. The Boston & Colorado we report in solid columns of from twenty to fifty bars at 999. The ingot melts prove both; and the "lack of uniformity in those differences" noted by Mr. Blake carries its own complaint back to the melting pot.

5. There are cases where we find and report Pa. Lead Co. bars above the stamp, as in 5566 to 5592. We do not hear complaints in cases of this kind and what of uniformity which results in gain to the principal is not objected to.

Very Respectfully,  
Jacob B. Eckfeldt  
Assayer

Hon. A. Loudon Snowden, Supt.